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ABSTRACT

Since 1985, students taking English 101, the basic composition course at Shoreline Community College (SCC) in Seattle, Washington, have been required to take the Nelson-Denny Reading Test and submit a piece of writing for holistic grading. The introduction of the testing process prompted several questions among students and faculty about what the test results meant in terms of students' chances of success in English 101. In 1985-86, two studies were conducted to compare students' test results and final course grades in English 101. Data were also recorded for student age and sex and correlated with course grades. The study found that there was a direct correlation between many of the students' scores and their performance in class; and that the predictive validity of the tests was imperfect, with many students doing well in class despite low scores and many doing poorly despite high initial scores. Interviews conducted with students and staff during the study period led to the following conclusions: (1) test results can serve as catalysts for student success; (2) the testing process can be an impetus for high school achievement; (3) a significant number of students who failed the course did so for reasons other than an ability problem; (4) students who do well in class despite low scores often do so because of the attitude and involvement of the instructor; and (5) the feedback component of the testing process plays a critical part in motivating students. (EJV)

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DIAGNOSTIC TESTING:
HOW RELIABLE IN DETERMINING STUDENT SUCCESS WITHIN THE COMPOSITION CLASS?

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Abstract

Beginning in 1985, students entering English 101 at Shoreline Community College were required to take the Nelson-Denny Reading Test and submit a piece of writing for holistic grading. The tests and writing samples were used, in part, to predict the likelihood of student success within the course. Many questions were raised by both faculty and students regarding the predictive reliability of the tests. A research study began shortly thereafter to analyze correlation between the diagnostic tests and writing scores and student achievement defined by final course grade. Diagnostic results proved to be an imperfect predictor of student achievement although a potential catalyst for increased course performance. The instructor's positive affirmation and interaction with students proved to be the key to excelled classroom achievement.

Diagnostic Testing - How Reliable in Determining Student Success Within the Composition Class?

I would like to tell all of the students who enter my class, "You can pass this course. Indeed, you can do very well."

Still, not all students who enter English 101 will pass. There are casualties. Some will simply not do the work required; others will take on a full load while trying to work forty-hour-a-week jobs, others will attend class occasionally, sleep frequently, and drift out of sight by mid-quarter. And a few, despite trying very hard to succeed, will still fall short of acceptable standards for sophomore writing skills.

For two years I have studied the influence of diagnostic testing in teaching English composition. The thesis of this article is that we as instructors are instrumental through our attitude, our personal care and our recognition of those in our classrooms as individuals. Important. Full of potential, aspiration, life, hope and promise. In addition, it is also my contention that while diagnostic testing and assessment of students, serves as a helpful indicator of student abilities, it is less reliable as a predictor of how much a student will achieve during the quarter. Student/teacher interaction remains the critical factor.

OVERVIEW

At the beginning of Spring Quarter 1985, our English instructors at Shoreline Community College, Seattle, Washington, began testing all students entering English 101, the college's basic composition class. During the first few days of the quarter, each 101 instructor began administering the Nelson-Denny Reading Test, (for vocabulary and reading comprehension), and acquired an expository writing sample to measure writing skills.[1] By the end of the first week, students were told how well they scored on each of the measured skills. The beginning of this process was the impetus for my study involving more than 500 students over a four quarter period. Questions were immediately raised by both faculty and students for which no one had answers. However, some immediate concerns were addressed.

Problems Solved

The introduction of this testing process provided some important information to both the instructor and the student:

1. The test provided an immediate assessment of students' vocabulary, reading, and writing skills.

2. Vocabulary and reading skills could be compared to national averages and instructors as well as students could gain an understanding of their scores in relationship to established norms.

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[1]The Nelson-Denny Test was developed by M. J. Nelson, Ph.D. and E. C. Denny, Ph.D., and is recognized nationally as a standard for measuring student aptitude in vocabulary and reading comprehension.

3. Students with low scores could be recommended for remedial help with English 100, lab sections of reading and writing, or through tutorial assistance.

QUESTIONS RAISED

While the testing process solved some problems, it also created several others. After one quarter of administering these tests, tough questions raised by our faculty included:

1. Is there a correlation between test scores and how well a student performs in 101?

2. What can I tell my students based on the results of these tests?

3. Do low test scores mean that a student should drop 101 and take a more remedial course.

Students had their own questions:

1. Do the low numbers mean, that I'll flunk the class?

2. Do the high numbers mean that I'll get an A?

3. If I really "bombed" the tests, should I drop 101?

These were questions for which no one had the answers. The situation seemed to take on even greater significance after I estimated nearly 1,500 students would be tested in this process over three quarters, year after year. To date, over 3,000 students have been tested, nearly 3/4 of SCC's full-time enrollment.*

The problems raised by our faculty and the serious question of, "What can we accurately and confidently tell our students based on the diagnostic test results?" was the impetus for my study. In my research, I sought to answer the basic question - is there a correlation between low test scores and low achievement in 101, and high scores and high achievement? Was our testing system a reliable indicator of student success within the composition classroom? This study also allowed me to research correlations between sex and performance, and age and performance.

PILOT STUDY

I conducted a pilot study in the spring and summer of 1985 involving 118 students and four different instructors in five English 101 classes. The pilot study proved to be useful in providing some immediate information to our faculty and served as a point of comparison for a second study. In this first stage of research, the Nelson-Denny test scores of 118 students were compared with their final course grade. A summary of my findings are on Charts #1 and #2.

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*Spring 1986

In some instances I found a direct although imperfect correlation between test scores and student performance within English 101 classes. Sixty-two percent of the students who scored in the 76-100% range on vocabulary received an A, 28% a B. Only 10% received a C or less. The results of the reading test were similar. Seventy percent of students who scored in the 76-100% range on reading received an A or B for the course.

However, there were also some surprising results. The correlations showed that a significant number of students succeed in English 101, despite low diagnostic scores. For example, 22% of those who scored in the 0 - 25% range received an A, despite initially having the lowest scores in the class. Why? In addition, a significant number of students did poorly in class, despite scoring very highly on the tests. A quarter of the students who received the highest diagnostic scores received a D or F for the quarter. Again, this raised more questions.

FORMAL STUDY

The pilot study formed the basis of a formal study involving nearly 500 (N=492) students in 21 different classes during fall quarter 1985 and winter quarter 1986. Data was also recorded for student age and sex and correlated with course grades. The average age of students in the survey was 20, 221 females, 180 males. Females scored significantly better than males. Also, older students generally outperformed their younger counterparts. The median percentile ranking on Vocabulary was 45, and 44 on Reading Comprehension. The national median is 50. Writing was scored Holistically on a scale of 1 - 4, the mean for all students was 2.8

The average percentile score on vocabulary for students who received an F for the quarter was 38. Here, there appears to be no strong correlation between scores and final grades. Indeed, a score of 38 for those who received F's is solid, in the judgment of most instructors, and not predictive of failure. This finding corroborated with the results in the pilot study.

However, an examination of the D, C, B, and A student scores, reveals scores that correlate with classroom achievement. "D" students received an average percentile ranking of 29, "C" students 35, "B" students 47, and "A" students 52, indicating that an increase in vocabulary aptitude correlates with increased classroom performance. Nearly 90% of the students who scored 70% or above on vocabulary received a B or A for the quarter.

Reading scores and correlation with final grades corresponded to the trends in vocabulary ability and final grade. With some very noteworthy exceptions, students who scored well in reading comprehension also performed well during the quarter. Over 84% of the students who scored 70% or above on reading comprehension earned a B or A for the quarter.

The average percentile ranking for all students was 42. Students who passed with a D for the quarter grade received an average reading score of 32, C students received a score of 34, B students averaged 43, and A students averaged 53. Again, however, the surprising scores were of the "F" students who received an average of 47, four percentage points above the students who received a B for the quarter.

Holistic writing scores showed similar predictive value. Again, with the exception of students failing the course, higher writing scores generally corresponded with higher final grades. Students who received a D for the

quarter averaged a holistic score of 2.1, "C" students averaged 2.7, "B" students averaged 2.8, and "A" students averaged 3.0.

This study supports the strong interrelationship between vocabulary, reading comprehension, and writing skills. Students who generally scored well or poorly on one part of the test scored similarly on other sections. In addition, no one part of the three-part diagnostic process proved significantly more reliable in predicting a student's achievement. All the tests show similar patterns of correlation.

In essence, my conclusions are twofold:

1) There is a direct correlation between many of the students' scores and their performance in class. (With the exception of those students who received an F, there is an obvious relationship between diagnostic scores and final course grade.)

2) The correlations and the predictive validity of the tests are very imperfect. There are many students who do well despite low scores and many who do poorly despite scoring very high initially.

PEOPLE BEHIND THE NUMBERS

Even more important than the statistical data I gathered, was the interpretation of that data. What's happening with individuals behind the numbers? Based on interviews that I conducted with both instructors and students over the past year, I made several personal observations:

1) The test results serve as catalysts for student success. One student whose comments typify many others, said "The test results let me know that I would really have to work hard to succeed in the class." Another student said, "The test scores really opened up my eyes. I didn't realize before that I would need some help. It's been ten years since I've been to school."

2) The testing process serves as impetus for high student achievement. Every instructor in the study agreed that the attitude of English 101 students had become more serious since the introduction of the diagnostic test. Interviews with students seemed to support this. Michael, an 18 year old, said, "I was slacking in high school and it (the testing) made me realize that I had to change my attitude about school. I took on a more serious attitude." Despite scoring as low as the 7th and 12th percentile rankings on the reading and vocabulary, and not much higher than average on writing, Michael earned a B for the quarter.

3) A significant number of students who flunked English composition, appeared to do so because of something other than an ability problem. (Solid scores on vocabulary, reading, writing, and interviews with instructors later helped to confirm this conclusion.) Motivating the student with high aptitude may be as significant (but often overlooked) a challenge as increasing the skill and motivation of students with low aptitude.

4) Students, who "buck the trend", who do well in class despite low diagnostic test scores, often do so because of the attitude and involvement of the instructor. (Perhaps we've known this intuitively all along.) I interviewed several students in this study who excelled in class, despite receiving extremely low diagnostic scores.* Most of the students who received A's or B's in class, (despite scoring as low as the 2% ranking on the tests!), point directly to the instructors as being one of the primary causes of their high achievement.

Comments from four students that typify the responses and feelings of many others interviewed, support this conclusion. "I had an excellent instructor," said one student who received an A, despite initially showing vocabulary and reading levels at the 9th grade level and writing skills not much higher. "He was there to encourage me . . . when I needed him!"

Michelle, a seventeen year old who received a B despite scoring in the lowest percentile rankings on the diagnostic tests explains why she excelled: "The instructor had a very open, imaginative, and creative approach to the class. My opinion was welcome."

Other students provided similar comments on the positive approach of their instructors. A young woman named Eva, who also showed dramatic strides over the quarter said, "I had a very good teacher. I've never had one like her before. She would help each student individually." Another student said, "I talked to my instructor all the time. She was

*Out of ten factors which positively influence student retention in public two year colleges, Phillip Beal and Leo Noel (1982) found that the number one factor is the caring attitude of faculty and staff.

very positive and helped me. She would emphasize the good points on my paper - not the negative."

5) The crucial point of the testing process is when instructors report test scores to the students. For the student who receives a high score, the tests can serve as a confidence booster and relieve many anxieties.* For the student who scores low on the tests, the numbers can become a harsh label, perhaps shattering the confidence and hopes of aspiring writers. A wall of failure, rather than a bridge to success.

However, in the hands of a caring, committed and positive instructor, the diagnostic process and the scores serve as a launching pad for excellence. I observed that a careful instructor will tell his or her low scoring student, "Look, this is where we are, your scores are this . . . Yet, I'm excited about working with you as we work to improve your abilities. I have confidence in you!"

IN TERLINGUA

In essence, I've observed that the good teacher is communicating: I CARE. Instructors were instrumental in building bridges to freedom for their students, letting them be all they could be, encouraging them to their full potential.

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*As some of my colleagues have suggested, for some students, the testing process might be an "overconfidence booster." This potential problem can be overcome if we tell our students that high scores are no guarantee of success, just as low scores are no guarantee of failure.

In light of the importance of caring, positive reinforcement, author and professor, Trent Jones, tells the following story:

> "A conversation I once had with another teacher perhaps best illustrates what I'm talking about. I was trying to explain my theory of praising a child to promote success and the teacher said to me, 'What you're actually doing is lying to the kid. You're telling him that he's more than he really is. If a child is not as smart as the rest of the students, he simply has to learn to accept that fact and make the best of the situation.'
>
> "That is what many of us in Terlingua would classify as garden variety (expletive). What he was telling me, in effect, was that there are smart kids and dumb kids and they had damn well better learn to accept their proper place in society. As tragic as it may seem, I'm afraid that this train of thought typifies the way many parents and teachers feel about their students and children. I personally think they are dead wrong. How can you be lying to a kid by telling him that he is somebody special, that he is capable of doing wonderful, self-satisfying things?"

Conclusion

The results of this study support that diagnostic testing can be a positive influence, an excellent first step in outstanding student achievement.

However, diagnostic testing must be used with caution. Although for many students there is a correlation of test scores and writing sample analysis with course performance, there are a significant number of students who excell despite being initially diagnosed as "unlikely to pass the course". In addition, scoring well on the diagnostic tests is no guarantee of an equally high course grade.

Many factors influence a student's performance throughout the quarter, some controllable, others outside the purview of the instructor. For many students, the testing process and results serve as an impetus for excelled achievement. However, not surprisingly, the apparent key for success is the instructor's careful guidance and interaction with his or her students.

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